

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-20(Cancelled).

21 (Currently Amended): An immunogenic composition comprising ~~an effective amount of~~ a polypeptide comprising at least eight consecutive amino acids from the amino acid sequence of SEQ ID NO: 4 or from a homolog thereof, which said polypeptide induces present in said composition in an amount effective to induce antibodies that recognize SEQ ID NO: 4 to *Neisseriae* strains in a mammalian subject, and a pharmaceutically acceptable carrier.

Claims 22-24 (Cancelled).

25 (Currently Amended): A diagnostic composition comprising a polypeptide comprising ~~a sequence of~~ at least eight consecutive amino acids from the amino acid sequence of SEQ ID NO: 4 ~~or from a homolog thereof~~, which polypeptide induces antibodies that recognize SEQ ID NO: 4 to *Neisseriae* strains in a mammalian subject, ~~and said polypeptide associated with~~ a suitable detectable label or detection system.

Claims 26-29 (Cancelled)

30 (New): The composition according to claim 21, wherein said composition comprises a second polypeptide or protein.

31 (New): The composition according to claim 30, wherein said polypeptide is fused to said second polypeptide or protein.

32(New): The composition according to claim 30, wherein said second polypeptide or protein is an antigen from a pathogenic species that is heterologous or homologous to *Neisseriae gonorrhoeae* or *Neisseriae meningitidis*.

33(New): The composition according to claim 21, comprising an adjuvant.

34(New): The composition according to claim 21, wherein said antibodies also recognize an approximately 85 kD outer membrane protein in multiple *Neisseriae gonorrhoeae* and *meningitidis* strains.

35(New): The composition according to claim 34, wherein said *Neisseriae meningitidis* strains are selected from the group consisting of *N. meningitidis* HH, *N. meningitidis* MP78, *N. meningitidis* MP3, and *N. meningitidis* MP81.

36(New): The composition according to claim 34, wherein said *Neisseriae gonorrhoeae* strains are selected from the group consisting of *N. gonhorroae* FA19, *N. gonhorroae* FA635, *N. gonhorroae* FA1090, *N. gonhorroae* JS1, *N. gonhorroae* MS11, and *N. gonhorroae* F62.

37(New): The composition according to claim 21, wherein said polypeptide lacks the signal sequence spanning amino acids 1-21 of SEQ ID NO: 4.

38(New): The composition according to claim 25, which is a diagnostic kit.

39(New): The composition according to claim 25, wherein said polypeptide is associated with nitrocellulose paper or a latex support.

40(New): The composition according to claim 25, wherein said composition comprises a second polypeptide or protein.

41(New): The composition according to claim 40, wherein said second polypeptide or protein is fused to said polypeptide.

42(New): The composition according to claim 40, wherein said second polypeptide or protein is an antigen from a pathogenic species that is heterologous or homologous to *Neisseriae gonorrhoeae* or *Neisseriae meningitidis*.

43(New): The composition according to claim 25, wherein said polypeptide lacks a signal sequence spanning amino acids 1-21 of SEQ ID NO: 4.

44(New): The composition according to claim 25, wherein said antibodies also recognize an approximately 85 kD outer membrane protein in multiple *Neisseriae gonorrhoeae* and *meningitidis* strains.

45(New): The composition according to claim 44, wherein said *N. meningitidis* strains are selected from the group consisting of *N. meningitidis* HH, *N. meningitidis* MP78, *N. meningitidis* MP3, and *N. meningitidis* MP81.

46(New): The composition according to claim 44, wherein said *N. gonhorroae* strains are selected from the group consisting of *N. gonhorroae* FA19, *N. gonhorroae* FA635, *N. gonhorroae* FA1090, *N. gonhorroae* JS1, *N. gonhorroae* MS11, and *N. gonhorroae* F62.

47(New): A method for generating an antibody to a *Neisseriae meningitidis* or *gonorrhoeae* bacterium comprising administering to a mammalian subject an immunogenic composition of claim 21.

48(New): A method of detecting *Neisseriae meningitidis* or *Neisseriae gonorrhoeae* bacterium in a biological sample comprising contacting said sample with a composition of claim 25, wherein said polypeptide binds with antibody in said sample that recognizes an approximately 85 kD outer membrane protein in said *Neisseriae* bacterium.

49(New): A method of manufacturing the immunogenic composition of claim 21 comprising the steps of isolating a recombinant polypeptide comprising at least eight consecutive amino acids from the amino acid sequence of SEQ ID NO: 4, which polypeptide induces antibodies that recognize SEQ ID NO: 4; and formulating said polypeptide in an amount effective to induce said antibodies in a mammalian subject, with a pharmaceutically acceptable carrier.

50(New): An immunogenic composition comprising a polypeptide comprising an amino acid sequence having 95% or greater sequence identity with the entire sequence of amino acids of SEQ ID NO: 4, said polypeptide present in said composition in an amount effective to induce antibodies that recognize SEQ ID NO: 4 in a mammalian subject, and a pharmaceutically acceptable carrier.

51(New): The composition according to claim 50, said polypeptide lacking the signal peptide spanning amino acids 1-21 of SEQ ID NO: 4.

52(New): The composition according to claim 50, wherein polypeptide contains one to four conservative amino acid replacements in the amino acid sequence of SEQ ID NO: 4.

53(New): The composition according to claim 50, wherein said polypeptide is SEQ ID NO: 4 with an amino acid residue change selected from among the amino acid residue differences between SEQ ID NO: 4 and SEQ ID NO: 2 as illustrated in FIG. 5.

54(New): A method of manufacturing the immunogenic composition of claim 50 comprising the steps of isolating a recombinant polypeptide comprising an amino acid sequence having 95% or greater sequence identity with the entire sequence of amino acids of SEQ ID NO: 4, which polypeptide induces antibodies that recognize SEQ ID NO: 4; and formulating said polypeptide in an amount effective to induce said antibodies in a mammalian subject, with a pharmaceutically acceptable carrier.